

Ephemeris at Greenwich Mean Noon. By Mr. Graham.

1848.		R.A.		Decl.		Log Δ.		1848.		R.A.		Decl.		Log Δ.
June	1	14 23 45.46		—11 22 55.1		0.24336		June	22	14 16 33.23		—11 40 2.7		0.29073
	2	23 9.51		22 32.6		24529			23	16 29.74		42 9.1		29323
	3	22 35.03		22 17.0		24727			24	16 27.78		44 22.3		29574
	4	22 2.02		22 8.5		24929			25	16 27.34		46 42.1		29827
	5	21 30.52		22 7.1		25134			26	16 28.44		49 8.6		30081
	6	21 8.56		22 13.0		25343			27	16 31.05		51 41.7		30335
	7	20 32.14		26 26.0		25556			28	16 35.16		54 21.2		30590
	8	20 5.25		22 46.2		25772			29	16 40.75		57 7.2		30846
	9	19 39.92		23 13.7		25992			30	16 47.83	11	59 59.6		31102
	10	19 16.16		23 48.5		26215		July	1	16 56.37	12	2 58.2		31359
	11	18 53.97		24 30.5		26440			2	17 6.37		6 3.0		31616
	12	18 33.34		25 19.7		26669			3	17 17.81		9 13.9		31874
	13	18 14.29		26 16.1		26900			4	17 30.70		12 30.8		32131
	14	17 56.81		27 19.7		27133			5	17 45.00		15 53.6		32385
	15	17 40.90		28 30.5		27369			6	18 0.70		19 22.2		32647
	16	17 26.56		29 48.4		27607			7	18 17.79		22 56.5		32907
	17	17 13.78		31 13.3		27847			8	18 36.26		26 36.5		33167
	18	17 2.57		32 45.3		28089			9	18 56.09		30 21.9		33427
	19	16 52.92		34 24.3		28333			10	19 17.24		34 12.7		33677
	20	16 44.81		36 10.2		28578			11	14 19 39.72	—12	38 8.6		0.3393
	21	14 16 38.25	—11	38 3.0		0.28825								

Elements. By Mr. Graham.

Epoch 1848, April 30.0, Greenwich M.T.

M	141° 54' 11".82	
$\pi - \Omega$	4 20 27.72	} M. Eq. 1848, April 30.
Ω	68 29 40.44	
i	5 35 23.98	
ϕ	7 13 36.92	
Log α	0.3777174	
μ	962".5660	

Constants for the above Elements.

$x = r a \sin (A + v)$	$A = 162^{\circ} 44' 32.20 + 1.003 d \Omega$
$y = r b \sin (B + v)$	$B = 75^{\circ} 13' 7.69 + 1.010 d \Omega$
$z = r c \sin (C + v)$	$C = 61^{\circ} 59' 21.64 + 0.889 d \Omega$
Log $e'' = 4.4141037$	log $a = 9.9982090 - 0.06 d \Omega$
Log $k_1 = 0.1596643$	log $b = 9.9558531 + 0.94 d \Omega$
Log $k_2 = 0.2145892$	log $c = 9.6418570 - 3.55 d \Omega$

r being the radius vector and v the true anomaly. These constants are calculated with an obliquity $= 23^{\circ} 27' 23''$, and are referred to the mean equinox of April 30.

Observations.

MARKREE.

(MM. Cooper & A. Graham.)

Greenwich M.T.	R.A.	Decl.
1848.	^h ^m ^s	[°] ['] ["]
April 29 45 10 17	14 52 36.88 - [9.250] ÷ Δ	-12 23 54.7 + [0.886] ÷ Δ
May 3 40 7 14 8	43 39.48 - [9.362] ÷ Δ	13 12.6 + [0.878] ÷ Δ
5 44 00 66	46 33.40 - [9.203] ÷ Δ	7 52.0 + [0.887] ÷ Δ
5 51 68 92	14 46 28.56	-12 7 37.8 + [0.894] ÷ Δ

"The last was taken with the meridian circle. The planet was compared with the following stars:"—

April 29	Bessel xiv.	1031	R.A.	Decl.
			^h ^m ^s	[°] ['] ["]
May 3	—	956	H.C. 1800	14 47 47.38 -11 57 27.0
5	—	846,956	— 1800	14 46 42.65 -11 49 21.8

ALTONA. Meridian. (Prof. Schumacher and Dr. Petersen.)

1848.	Altona M.T.	R.A.	Decl.
	^h ^m ^s	^h ^m ^s	[°] ['] ["]
May 5	11 50 46.1	14 46 31.65	-12 7 42.5
6	45 50.4	45 31.63	5 11.4
7	40 54.4	44 31.44	2 41.42
8	35 58.9	43 31.60	-12 0 12.4
9	31 3.6	42 32.12	-11 57 49.4
10	26 9.0	41 33.25	55 19.6
11	11 20 33.1	14 40 34.90	-11 53 1.1

"The three last observations are not very good on account of the faintness of the planet. The places depend on α *Virginis* and β *Libræ*, taken from the *Nautical Almanac*."

HAMBURG.

Meridian. (MM. C. & G. Rümker.)

	Hamburg M.T.	R.A.	Dec.
1847.	^h ^m ^s	^h ^m ^s	[°] ['] ["]
May 5	11 50 46.1	14 46 31.64	31.39 -12 7 47.5
6	45 50.1	45 31.35	31.35 5 16.9
7	40 54.2	44 31.22	31.06 2 45.7
8	35 58.9	43 31.64	.... -12 0 18.9
9	31 3.5	42 32.03	31.89 -11 57 52.4
10	26 9.1	41 33.29	33.60 55 29.2
11	21 14.8	40 34.77	.... 53 6.9
12	16 21.3	39 37.03	.... 50 55.0
13	11 27.7	38 39.15	39.31 48 39.6
14	11 6 35.2	14 37 42.46	.... -11 46 26.6

DURHAM. Equatoreal. (Prof. Chevallier & Mr. R. A. Thompson.)

1848.	Greenwich M.T.			R.A.			N.P.D.		
	^h	^m	^s	^h	^m	^s	[°]	[']	["]
May 6	10	40	46.1	14	45	32.28	102	5	12.8
8	10	52	5.7	43	31	33	102	0	7.6
9	12	2	46.4	42	28	63	101	57	32.1
10	10	56	58.4	14	41	32.38	101	55	15.3

Observations corrected for refraction only.

The star of comparison was observed on the meridian on May 9 and 10, and its place found to be,—

R.A.	^h	^m	^s	N.P.D.	[°]	[']	["]	Mag.
14 44 40.32				102 0 57.5				8

HARTWELL. Equatoreal. (MM. Hind and Reade.)

1848.	Greenwich M.T.			R.A.			N.P.D.		
	^h	^m	^s	^h	^m	^s	[°]	[']	["]
May 4	10	38	19	14	47	34.24	102	10	25.0
5	10	28	35	14	46	34.10	102	7	47.9

“The star of comparison is not found either in Lalande's or Bessel's catalogues. Its apparent place was obtained by comparison with Bessel xiv. 846 and 931. The declinations deduced from comparisons with these stars differ 10". The apparent place adopted is

R.A.	^h	^m	^s	N.P.D.	[°]	[']	["]
14 47 27.54				102 1 33.9			

SOUTH VILLA. Equatoreal. (MM. Bishop and Hind.)

1848.	Greenwich M.T.			R.A.			N.P.D.		
	^h	^m	^s	[°]	[']	["]	[°]	[']	["]
April 30	13	39	31	222 52	3.3	+0.232 p	102 20 44.1	—0.886 p	
May 1	11	21	17	222 38	26.9	+0.138 p	102 18 17.1	—0.891 p	

CERES.*Observations.***HAMBURG.** Merid. Circle & Transit. (MM. C. & G. Rümker.)

		R. A.							
		Hamburg M.T.		Mer. Circle.		Transit.	Decl.		
		h	m	s	h	m	s	°	
1848.								'	
March	22	11	46	55.2	11	49	11.72	....	+ 19 45 8.5
	27		23	7.9		45	3.19	2.98	19 58 37.6
	28		18	24.0		44	15.22	15.31	20 0 33.6
	30		8	58.7		42	41.39	41.55	3 42.5
	31	11	4	17.5		41	55.77	55.95	4 56.0
April	1	10	59	37.1		41	11.38	11.46	5 51.3
	2		54	57.1		40	27.13	....	6 34.7
	3		50	18.4		39	44.34	44.58	7 2.9
	4	10	45	41.2		39	2.82	2.70	20 7 14.4
	15		9	56 8.0		32	....	43.55	.....
	16		9	51 45.4	11	32	16.76	16.44	+ 19 50 43.4